Advanced Combat Training Unit (ACTU)

ACTS includes the ACTU, a radio with Data-Link, and DTS - Data Transfer System.

ACTS is based on Elbit Systems' modular, open architecture computer running on standard VME64 bus and coupled with communication module which implements, together with the Transceiver Unit, the TDMA Data-Link function.
Data Link function includes the physical layer as well as the functions of data encryption/decryption, Forward-Error-Correction (FEC) and Forward Error Detection (FED).

- **ACTU**

- 115 VAC, 3 phase, 400 Hz
- MIL-STD-1553B
- Fast Ethernet
- RS-422 serial communication
- Analog Video out, RGB
- Digital Video out, LVDS (optional)
- GPS 1PPS
- Audio out (SVG – Synthetic Voice Generator)
- Discrete I/Os
- Analog in
- RS-232 – maintenance channel
- Dimensions: Height:200 mm
  Width: 165 mm
  Depth: 381 mm
  Weight: 8 Kg

- **Environmental:**

- Operating temperature: -54 ºC to +71 ºC
- Non-operating: -54 ºC to +95 ºC
- Meets MIL-STD-810E
- Meets MIL-STD-461C and RTCA DO-160C
- Meets MIL-STD-704A Category B

Elbit Systems, an acknowledged leader in Training and Simulation, builds on over three decades of training and simulation programs to offer across-the-board systems engineering and integration expertise applied to a comprehensive line of air, ground, and naval training and simulation solutions.These solutions range from mission preparation, through execution, to post-mission debriefing and analysis

- *Full Flight / Mission Simulators*
- *Multi source Digital Video Recordings*
- *Range-less ACMI*
- *Computer Based Training*
- *Embedded Simulations in avionics systems*
- *Instruction Cueing System based on DASH technologies.*

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Advanced Combat Training System (ACTS)

Flight training - as real as it gets

As both the complexity of the modern battlefield and capabilities of advanced fighters increase, training doctrines must be designed to increase effectiveness as well as bridge the gap in the transition from trainers to fighters.

ACTS is Elbit Systems' answer to the need for enhanced training tailored to all types of military platforms. Based on data link technologies, ACTS generates a comprehensive virtual environment for training that's as close to reality as it gets.

ACTS Key Advantages

Tailored to individual needs, the system provides the flexibility to generate realistic performance of all types of sensors, weapons and systems used by the customer.

- **Enhanced training**
  - Anytime, anywhere
  - Dynamic scenarios preloaded or initiated by the ground station
  - Typical behavior of the airborne and ground targets
  - Flexible array of weapons, sensors and threats
  - Real time score assessing
  - Post flight and Real-time 3D debriefing
- **Cost reduction**
  - Advanced comprehensive training on Trainer A/C
  - Actual Radars, Missiles Flares/Chaff are not required
  - Ground opposition & electronic ranges are not required
  - Single A/C Air-to-Air mission
- **Increased safety**
  - Minimize the gap between Trainers and Fighters
  - More targets – less aircrafts
  - Continuous members display
  - Collision warning
  - Virtual ammunition
  - Real-time monitoring by ground station

ACTS Main Features

- **Virtual Radar**
  - Generic radar performance or customized to the radar used by customer
  - Single A/C training vs. virtual target
  - Multi A/C training and comprehensive scenarios
  - Flexibility to simulate various types of radars
- **Virtual Missile**
  - For fighters - Any IR and EM missile can be simulated
  - For helicopters – Air-to-Air and Anti- tank missiles
  - Performance based on:
    - Selected missile
    - Launch conditions including DLZ calculation
    - Missile seeker – including Audio
    - Target behavior – Location, Kinematics, Engine, etc.
  - Real-time & post flight scoring
- **Virtual Threats**
  (for fighters, helicopters and transporters)
  - Virtual interceptors
  - Virtual Air to Air Missiles
  - Virtual SAM sites
  - Virtual AAA batteries
  - Including graphic indication of fired missiles
- **Virtual RWR**
  (for fighters, helicopters and transporters)
  - Airborne Virtual Radars & Virtual EM missiles
  - Virtual SAM & AAA batteries
    - Predefined Scenario
    - Real-time control through the ground station
- **Virtual EW suite**
  - Chaff & Flares
  - Self-Protection Jamming
  - Participates in score assessing for both airborne and ground threats
- **Instructor Station**
  - Real-Time control of the scenario
  - Can act as a participant in-flight
  - Flexibility to control multiple threats - airborne and ground
  - 3D debriefing of the flight
  - Score assessing